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State of Utah

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Environmental Quality

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February 18, 2004

Paul B. Baker
Utah Division of Oil, Gas & Mining
PO Box 145801
Salt Lake City, UT 84114-5801

Subject: Comments on Proposal to Fill Cowboy Vein, Ziegler Gilsonite
Operations, Uintah County, Utah

Dear Mr. Baker:

I have reviewed the submittal and laboratory analysis of the TCLP results for the Fly Ash that is being proposed as fill material in the Cowboy Vein. The Division of Water Quality has no concerns for the proposed use of this material, given it is placed above the best historically known water table level. The high pH of 10.9, as shown in the laboratory results, is above the Water Quality Standard for pH, which ranges from 6-8.5. Fly ash has the properties of being Pozzuolanic, which pertains to material that possesses little or no cementitious value, but that is capable of reacting chemically with calcium hydroxide at ordinary temperatures to form compounds with cementitious properties. This basically means that when infiltration water comes into contact with the fly ash, it becomes cement, binding water molecularly to the fly ash. One of our permitted facilities, Sunnyside Cogeneration Associates, has 2 landfills located in Sunnyside, Utah that are liner-less. Several years of monitoring has shown that no fluids move through this landfill. We further recommend capping the final fill with a 3-foot native soil or engineered soil cover that would inhibit infiltration that is vegetated.

Should you have any questions regarding this letter, feel free to call me at 538-6017.

Sincerely,

Keith Eagan, P.G.
Ground Water Protection Section

File: WP/DOGM Cowboy Vein

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FEB 20 2004

DIV. OF OIL, GAS & MINING